

**Indiana Principal Leadership Academy
Group 44**

Data Driven Instruction

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Data Driven Instruction

The School Leader:

Collects and analyzes data to make informed decisions that improve student learning.

Expectations: *for the audience*

- **Be kind to yourself**
- **Be fully present**
- **Be willing to learn**
- **Be willing to share**
- **Be kind & forgiving**

Expectations: *for the speaker*

- **Be relevant**
- **Be engaging**
- **Be a listener**
- **End on time**

Expectations:

about the outcomes

- **The learner will develop an understanding of the multifaceted approaches to data analysis**
- **The learner will become acquainted with methodologies on how classroom instruction can be driven by data**

Background: Overview

- **10 years in the classroom**
- **10 years in building admin**
 - **8 of those as principal of Daleville ES**
- **Systems analyst approach**
- **Dramatic growth**
- **Sustained performance**

Background: School Demographics

- 350-400 students
- K-6
- 98% White
- 30% F/R
- CSI averages = 95-101
- Title 1
- Average Class Size = 19

Background: School Demographics

- Located between Anderson & Muncie
- SpEd is inclusionary with 1/2 LD teacher & 1/2 speech teacher
- Ktg is only grade with IA's
- Increasing F/R percentages
- Increasing mobility rate

Background: Results (2001-2004)

- Average percent passing rose from 71% to 88% in 3 years
- 6th Grade ELA passing rose from 53% to 89%
- 6th grade Math passing rose from 72% to 98%
- Gains have been sustained

Background: Results (2007-08)

- 87% - average percent passing
- 96% - 6th grade math
- 88% - 6th grade language arts
- 88% - 5th grade math
- 90% - 5th grade language arts

KEY THOUGHT

Data is useless if it does not impact the classroom by way of content, sequencing or pedagogy

KEY FACTORS

- Key factors that affect school improvement
 - Raw material (Students)
 - Skilled labor (Teachers)
 - Support (Parents)
 - Resources (Funding)
 - Leadership (Principal)

Question...

- What do we do to help our raw material (students)?

Question...

- What do we do to help our skilled labor (teachers)?

Question...

- What do we do to help our support (parents)?

Question...

- What do we do to help our resources (funding)?

Question...

- What do we do to help our leadership (principals)?

Data Sources

- ISTEP+
- mCLASS
- DIBELS
- Terra Nova
- NWEA
- EduTest
- Indiana Reading Assessment
- GQE
- STI
- Acuity
- Orion
- PLATO

ISTEP+

- Academic Standards Analysis
- Trend Analysis
- Cluster Analysis

Academic Standards Analysis

■ Three Views

- Which Academic Standards carry the most weight at each grade level
- Which Academic Standards are increasing or decreasing in value across the grades
- Which Academic Standards are increasing or decreasing in value across the years

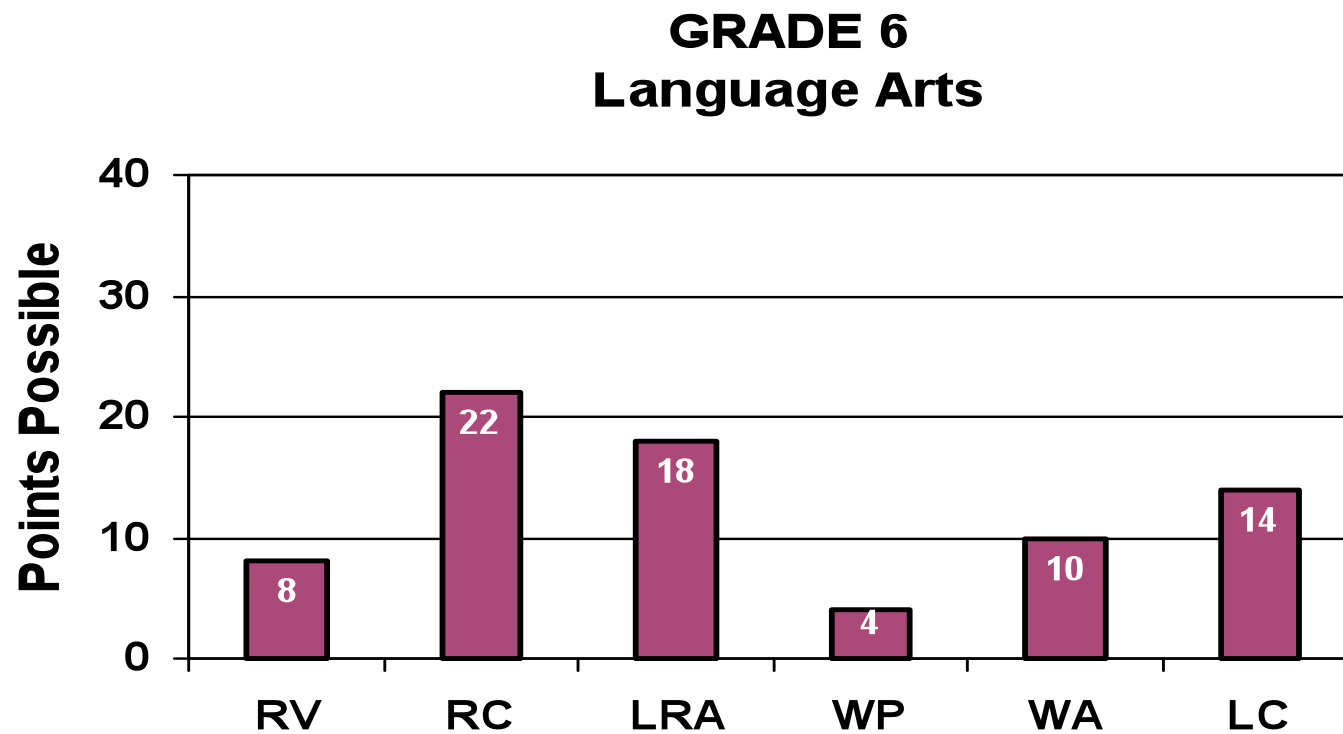
Academic Standards Analysis

- Which Academic Standards carry the most weight at each grade level

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 - Develop a graph indicating the Points Possible for each standard at each grade level
 - This is the first level of helping your teachers determine which standards require a concerted focus

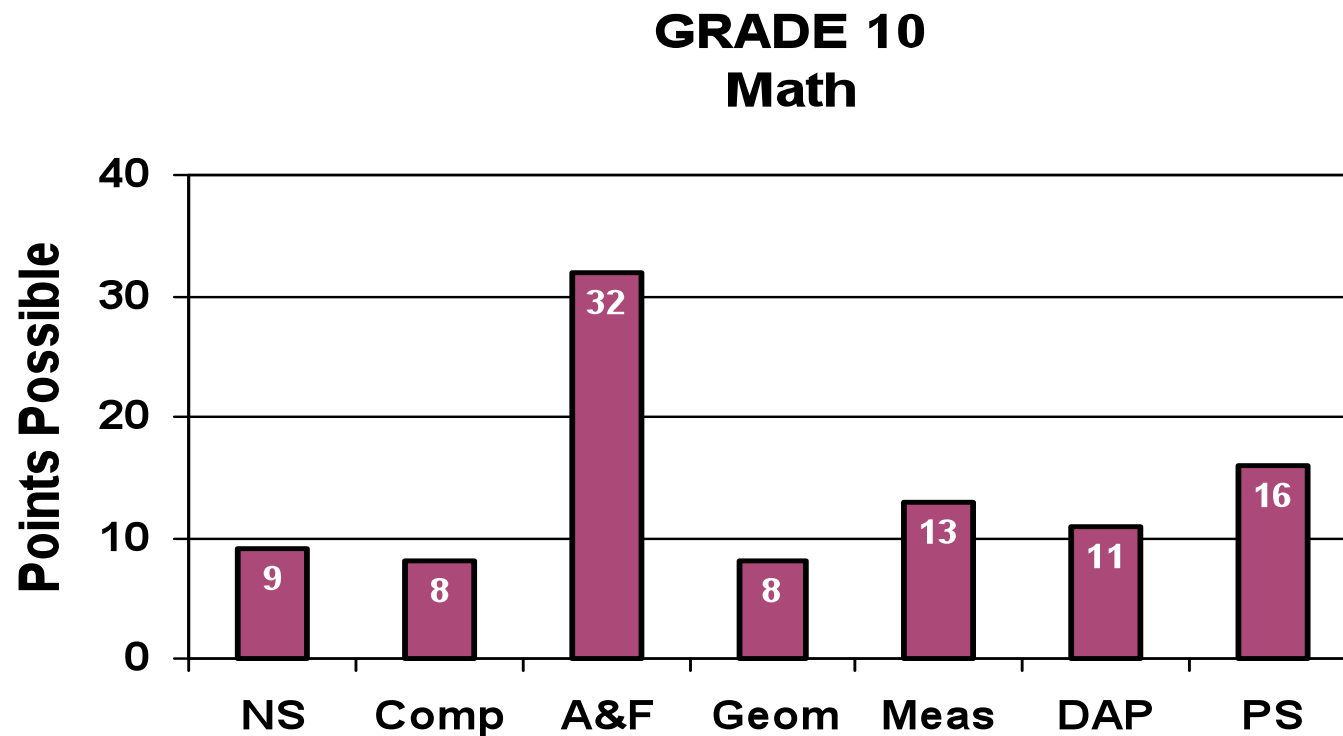
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- **How can the understanding of this data change classroom instruction?**
 - **What could be some beneficial outcomes?**
 - **What could be some negative outcomes?**

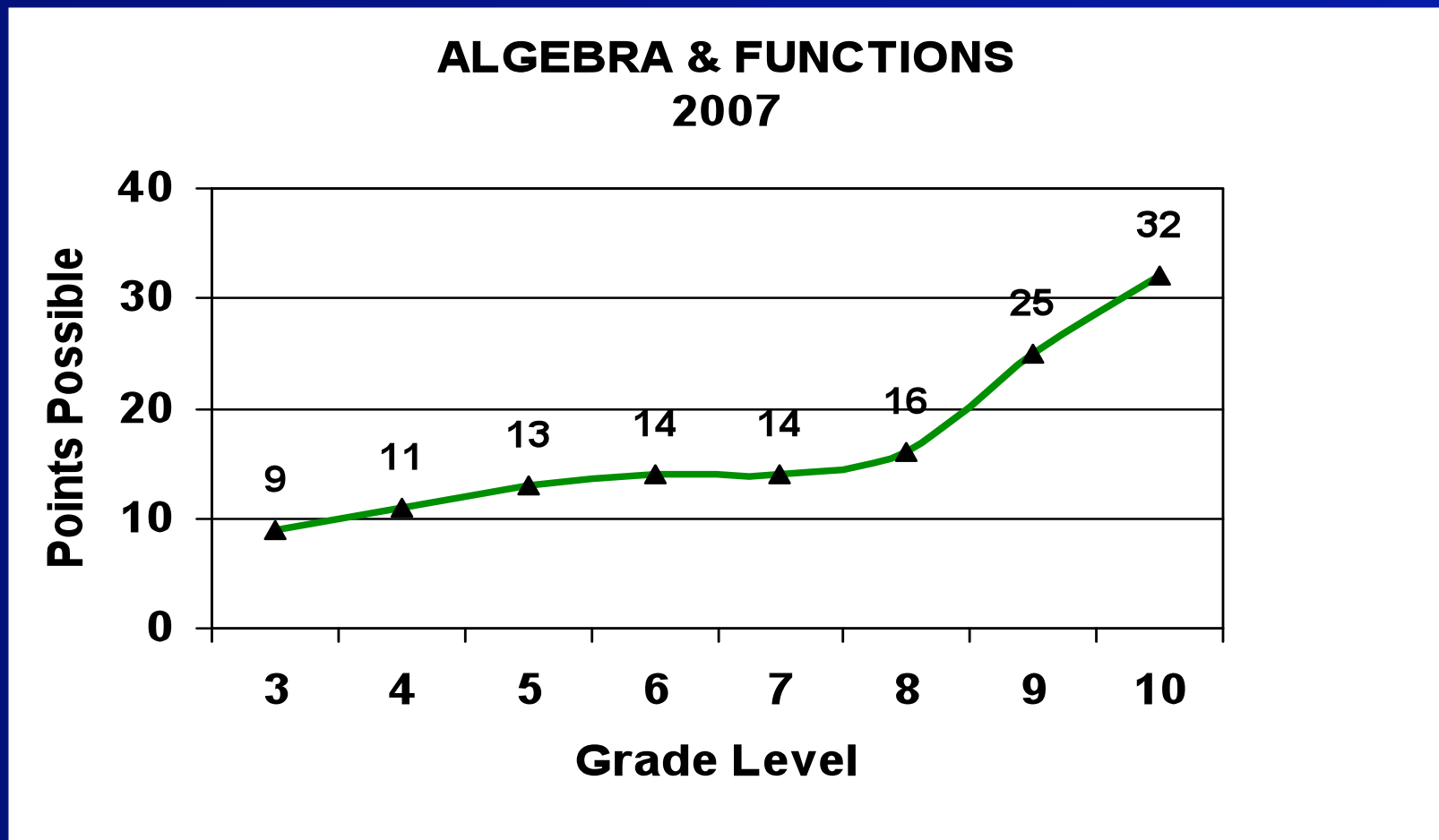
Academic Standards Analysis

- Which Academic Standards are increasing or decreasing in value across the grades

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 - Develop a graph showing the progression of a single standard across the grade levels

Academic Standards Analysis

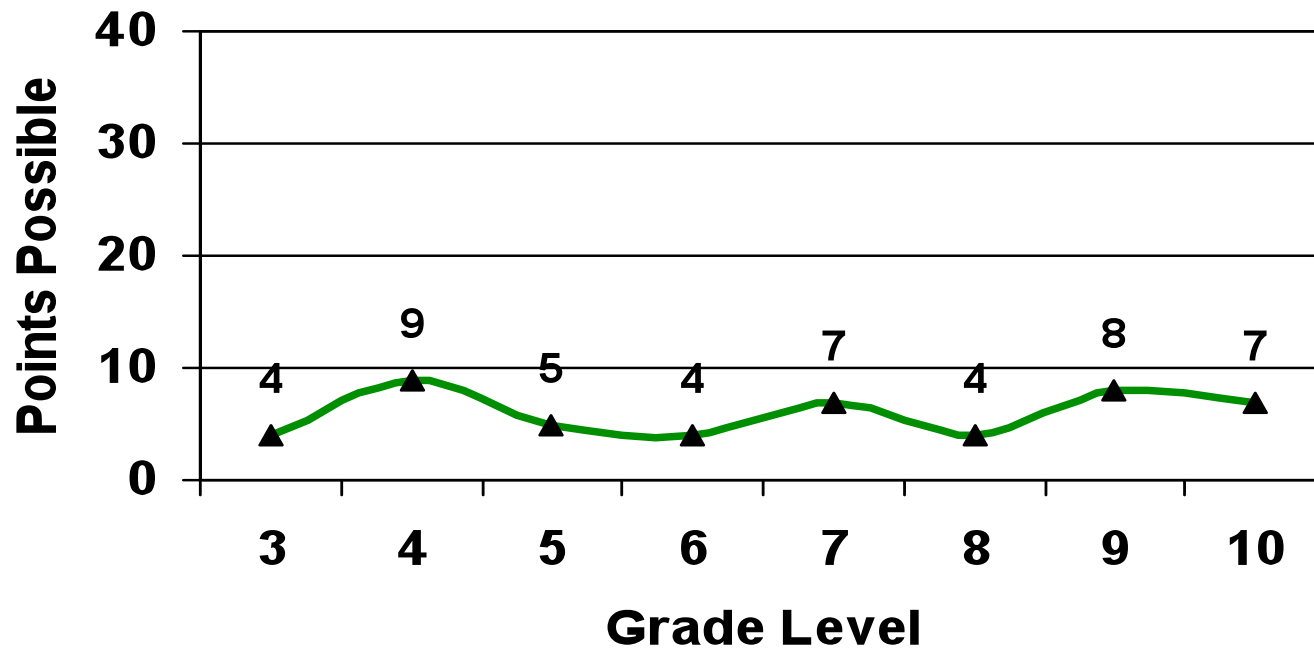
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Academic Standards Analysis

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WRITING PROCESS 2007



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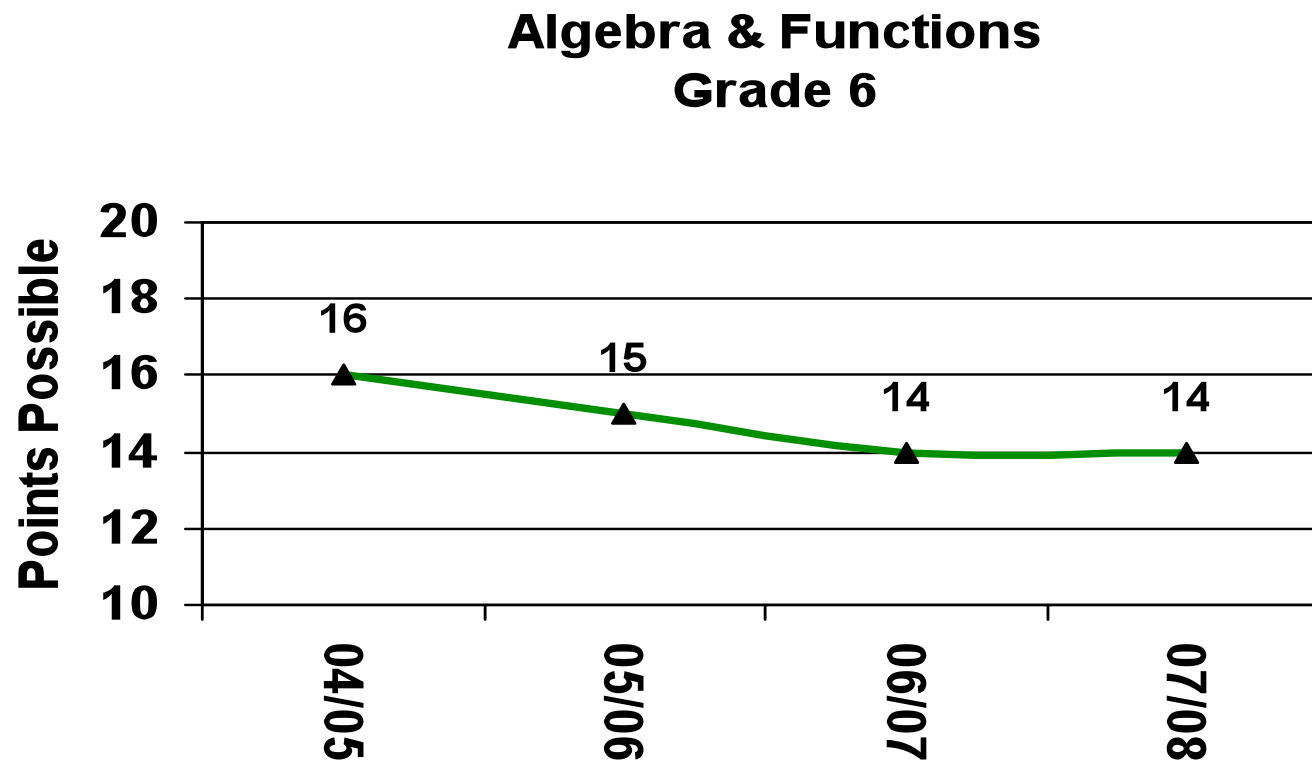
Academic Standards Analysis

- Which Academic Standards are increasing or decreasing in value across the years

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 - Develop a graph charting how each academic standard has increased or decreased in value for a single grade level during the past 4 years

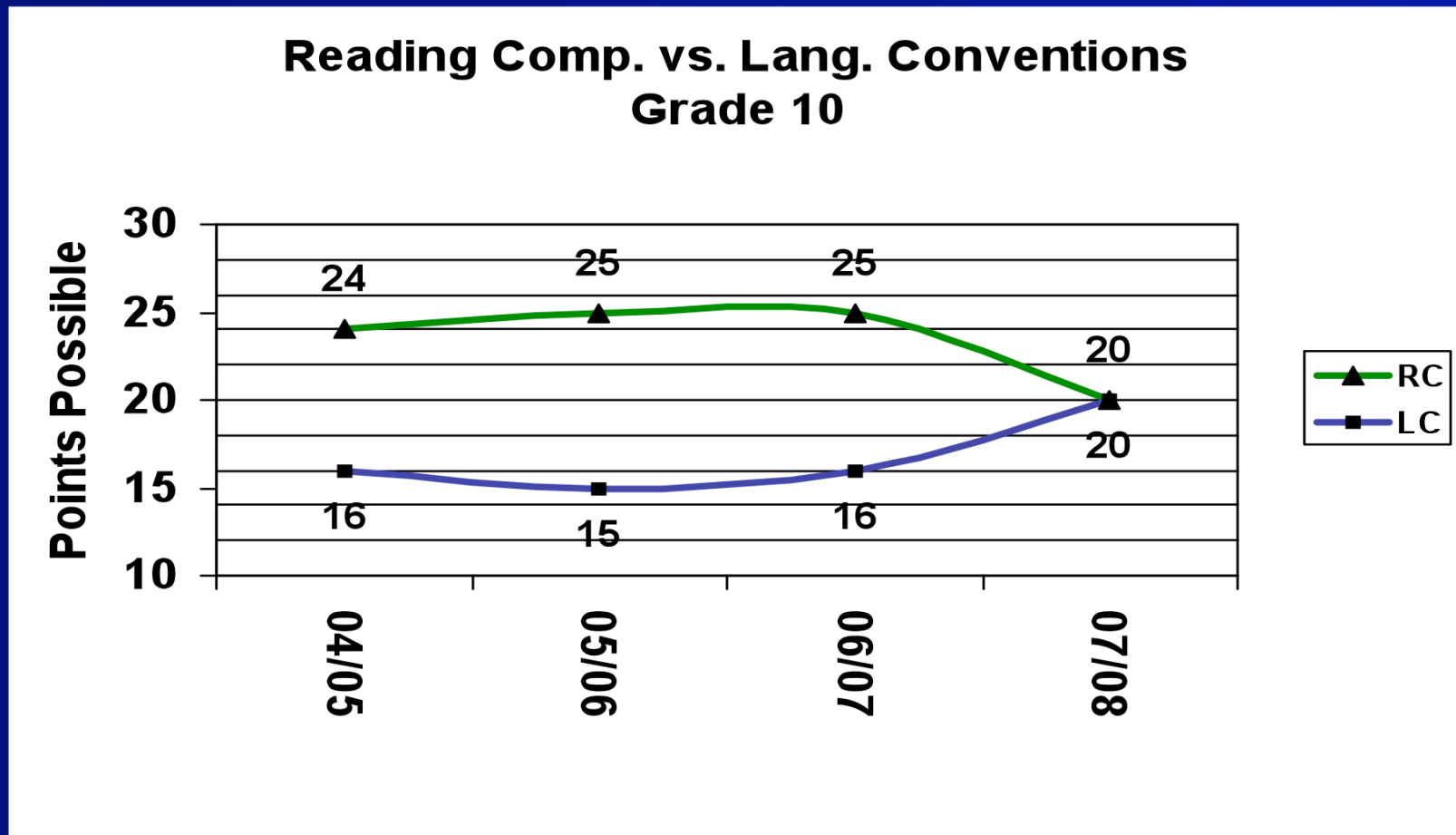
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Questions...???

Trend Analysis

■ Four Views

- Basic Cohort Trends
- Detailed Cohort Trends
- Grade Level Trends
- Single Year Vertical Snapshots

Trend Analysis

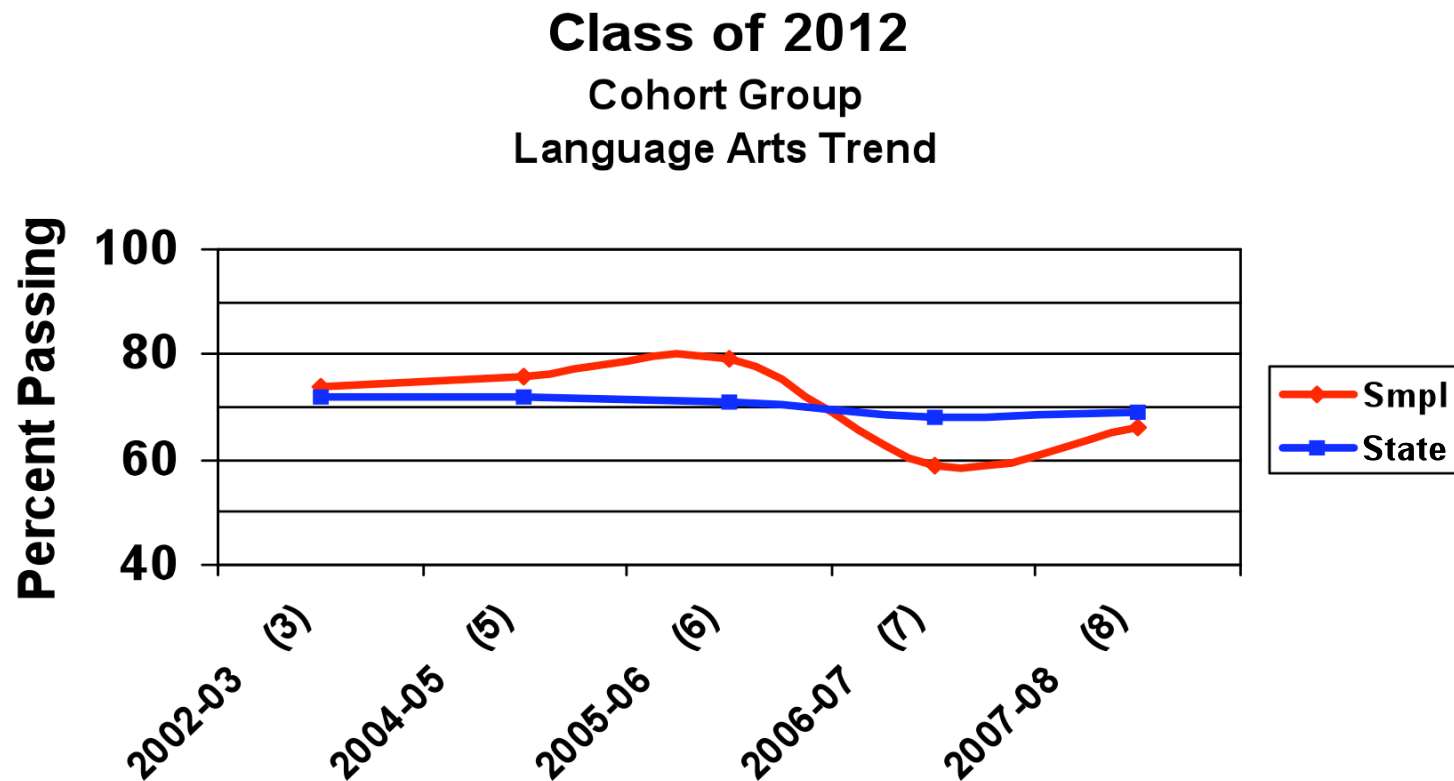
- Basic Cohort Trends

■ Basic Cohort Trends

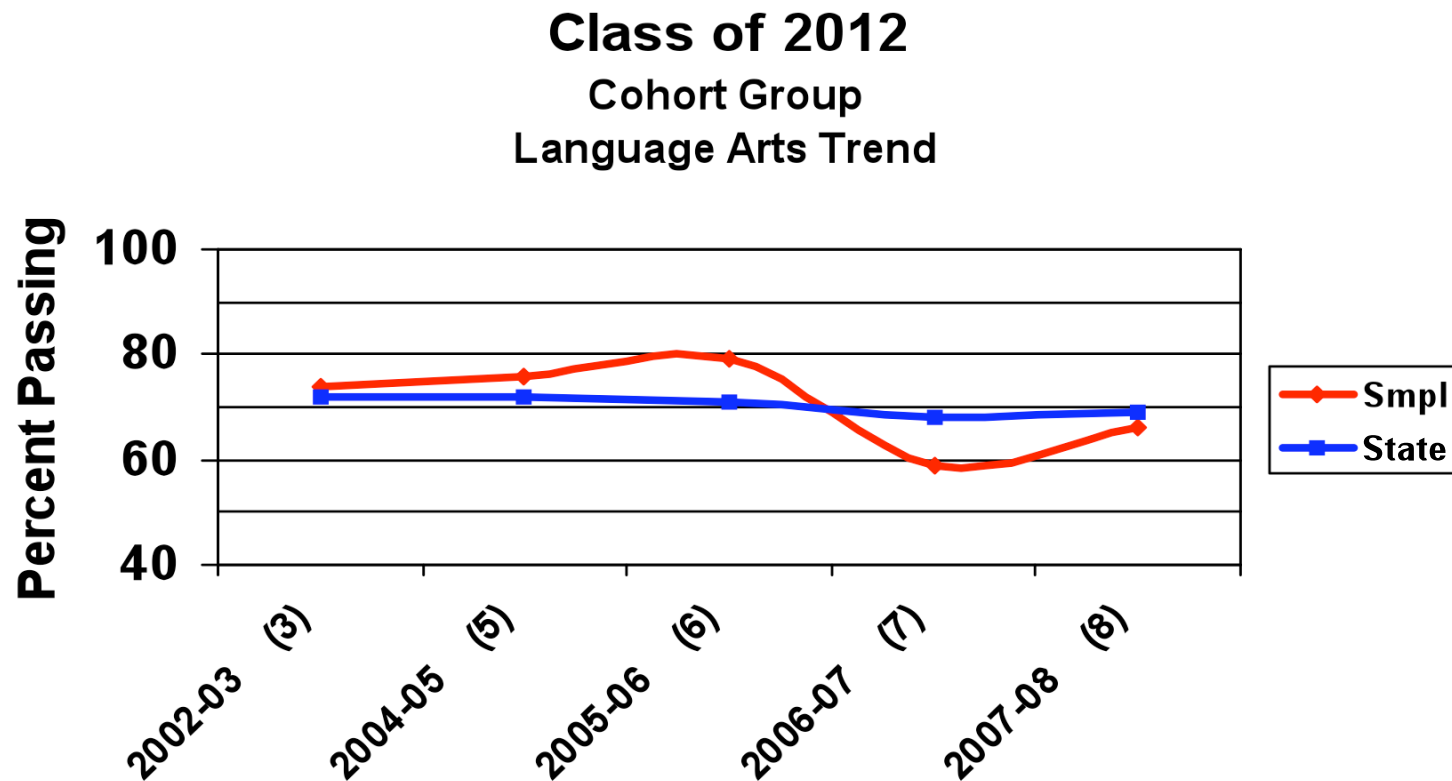
- Develop a graph showing the percent passing ELA & Math for each cohort group
- Include the state averages

Trend Analysis

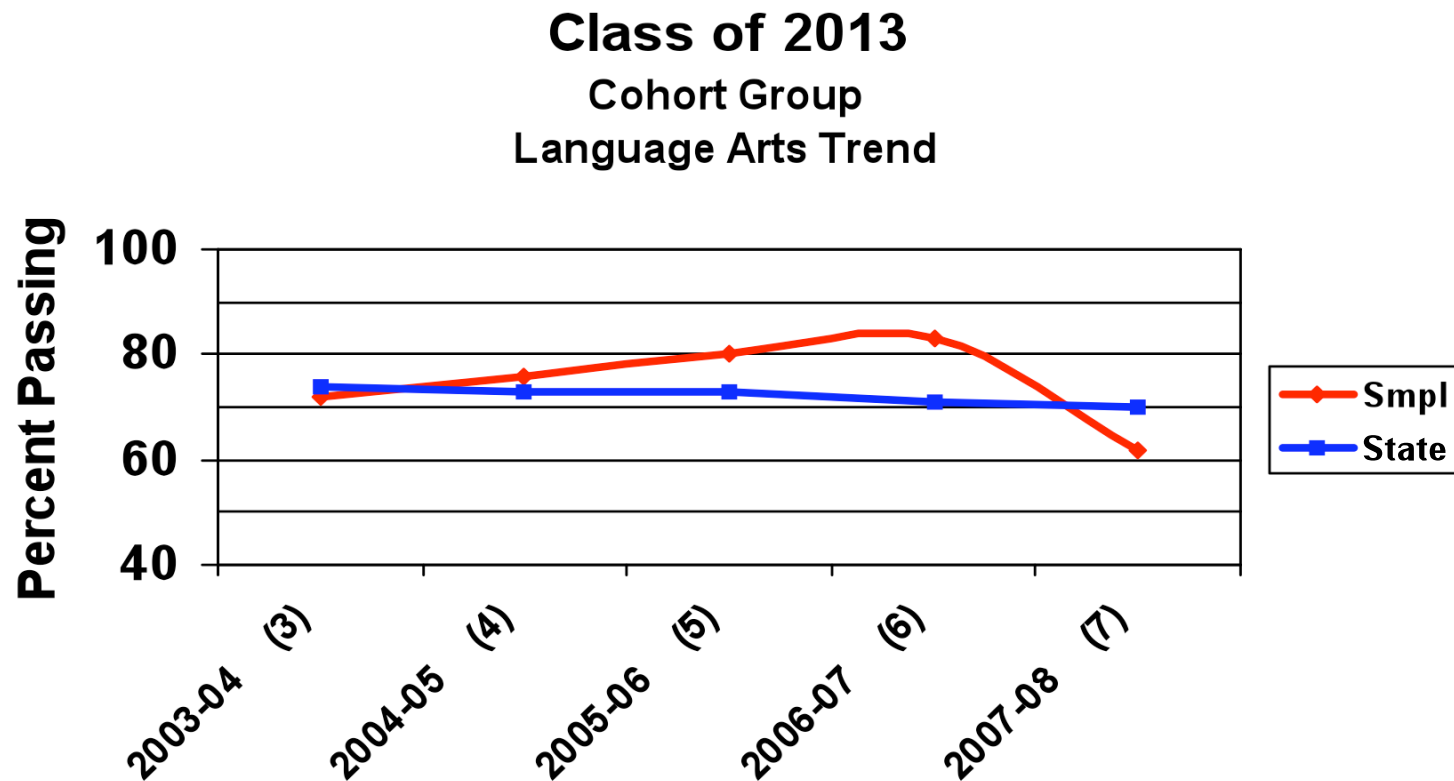
- Basic Cohort Trends



What could account for the drop in scores for the 7th grade test?



If this were the same school, what could you conclude?



Trend Analysis

- Detailed Cohort Trends

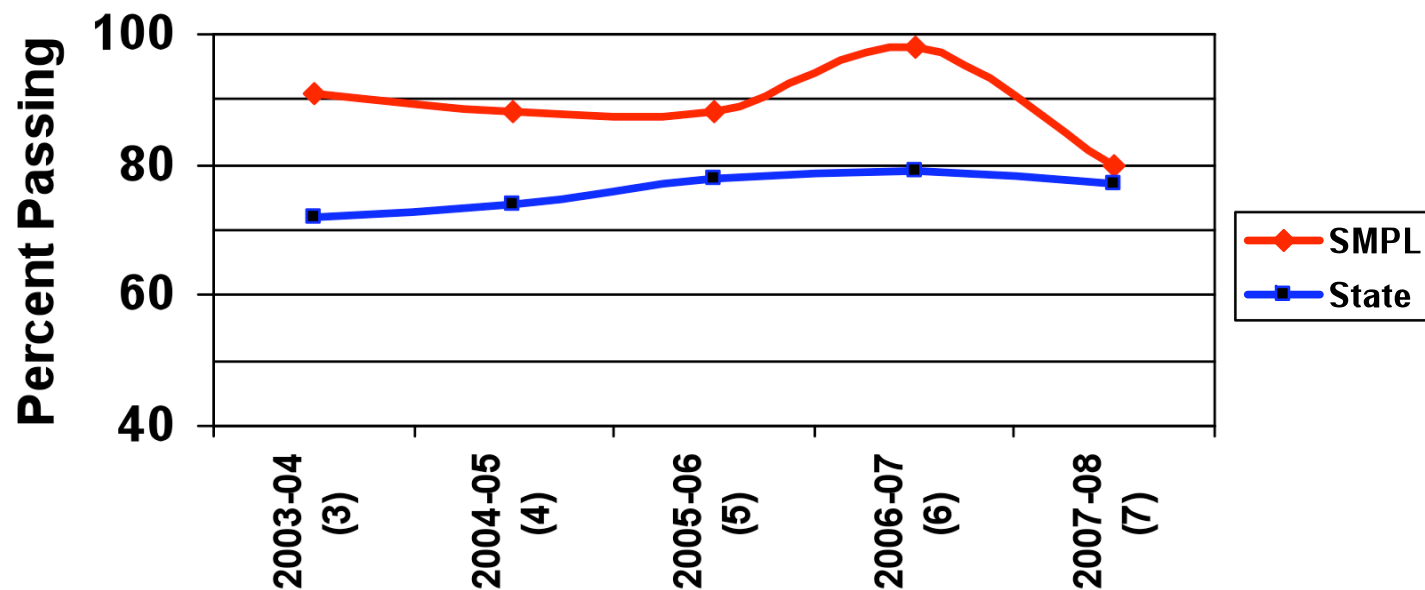
■ Detailed Cohort Trends

- Develop a graph showing the percent passing each Academic Standard for each cohort group
- Include the state averages

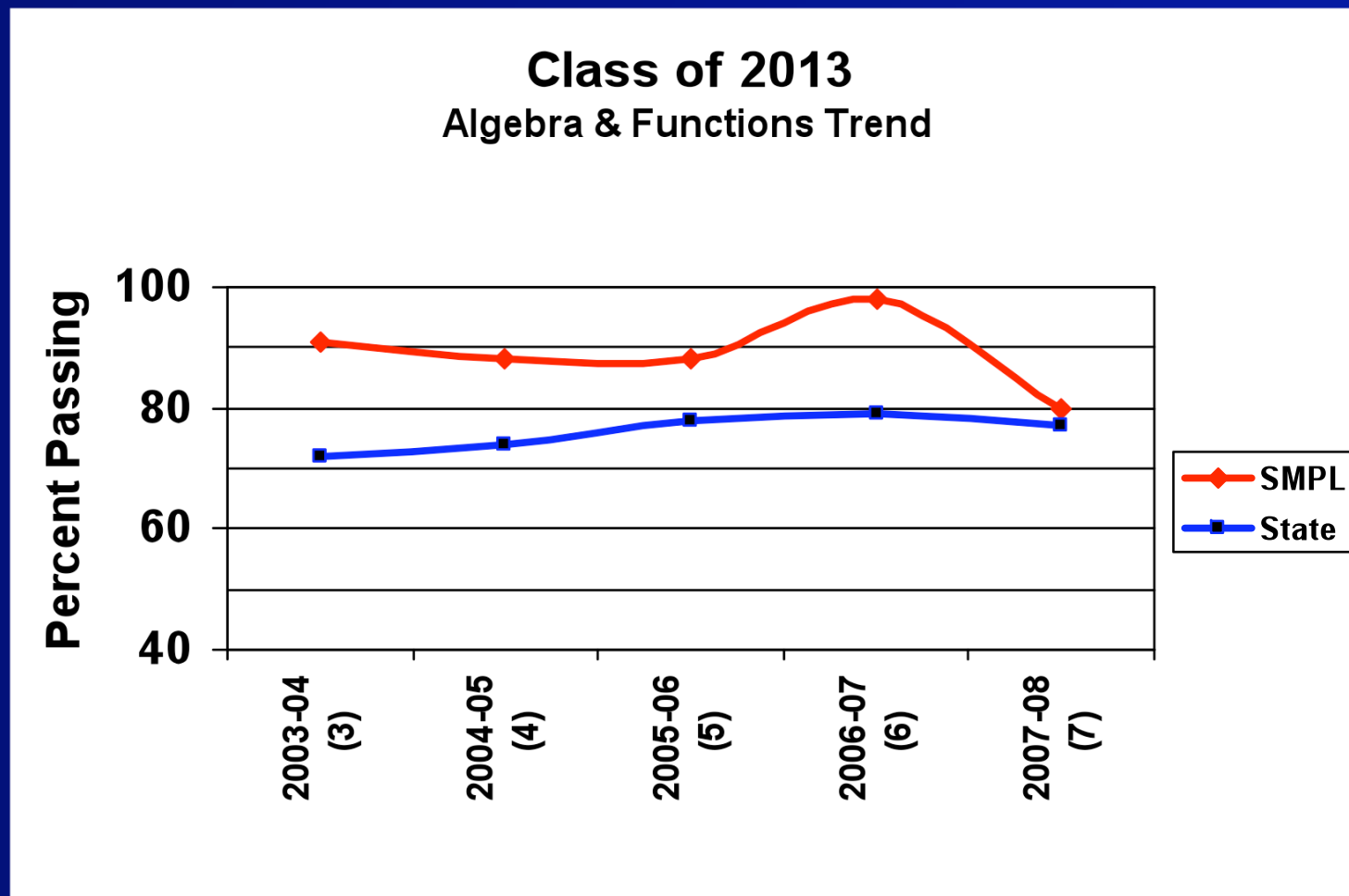
Trend Analysis

- Detailed Cohort Trends

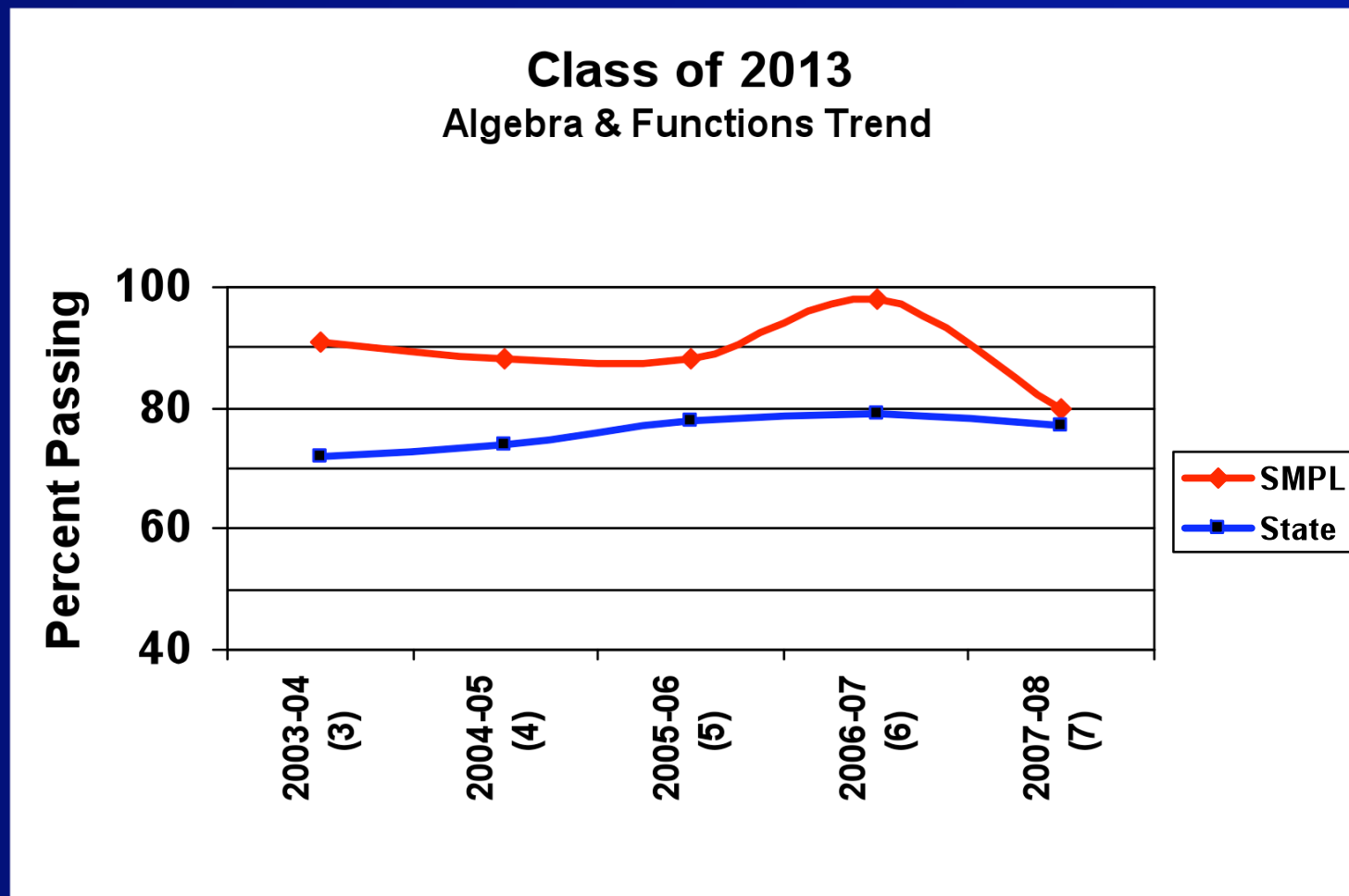
Class of 2013
Algebra & Functions Trend



What is the drop in scores for SMPL from grades 3-4?



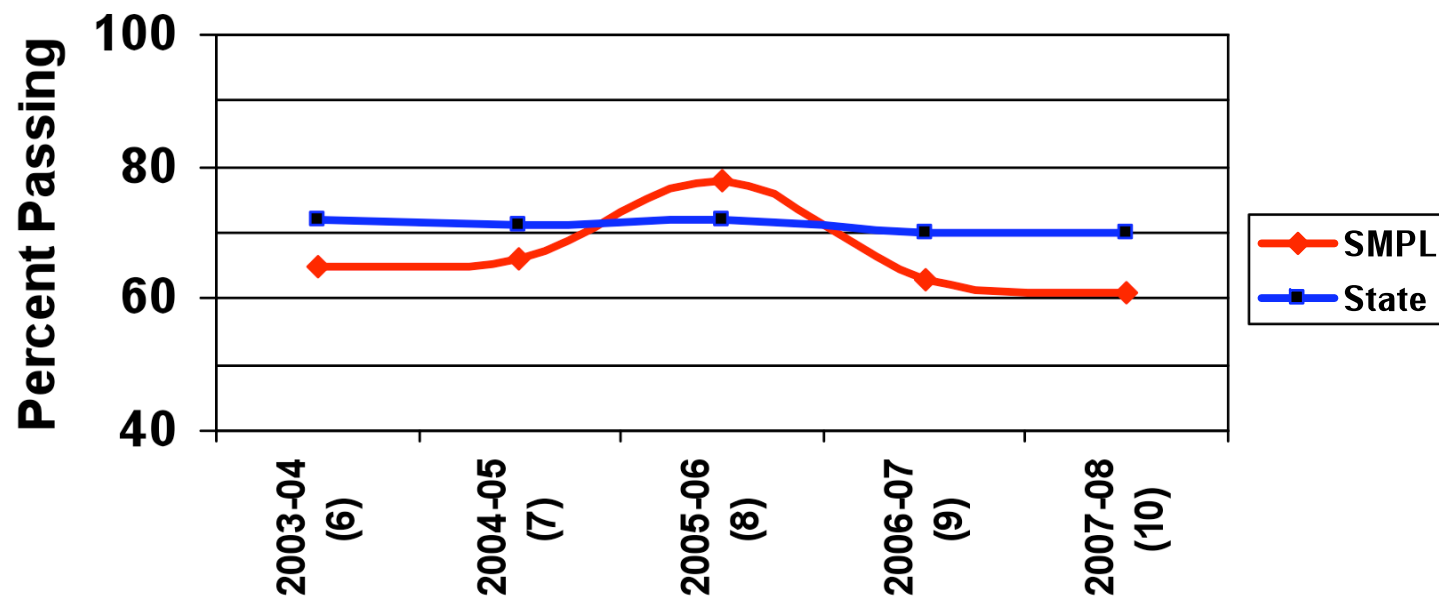
What is the drop in scores for SMPL from grades 3-4? Closure rate?



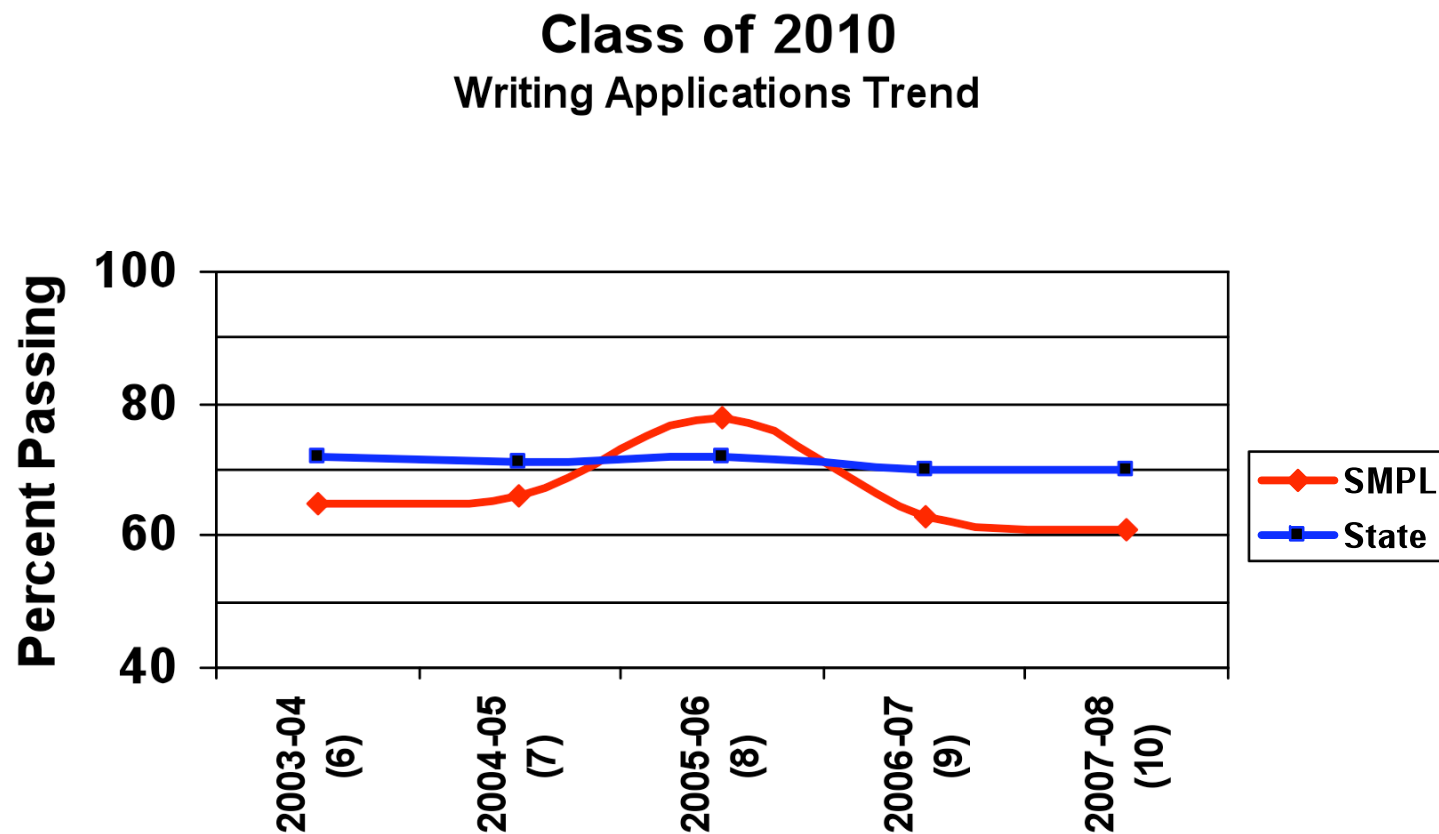
Trend Analysis

- *Detailed Cohort Trends*

Class of 2010
Writing Applications Trend



What could be the reasons for this bubble? How would you respond if the class of 2011 had a similar bubble?



Trend Analysis

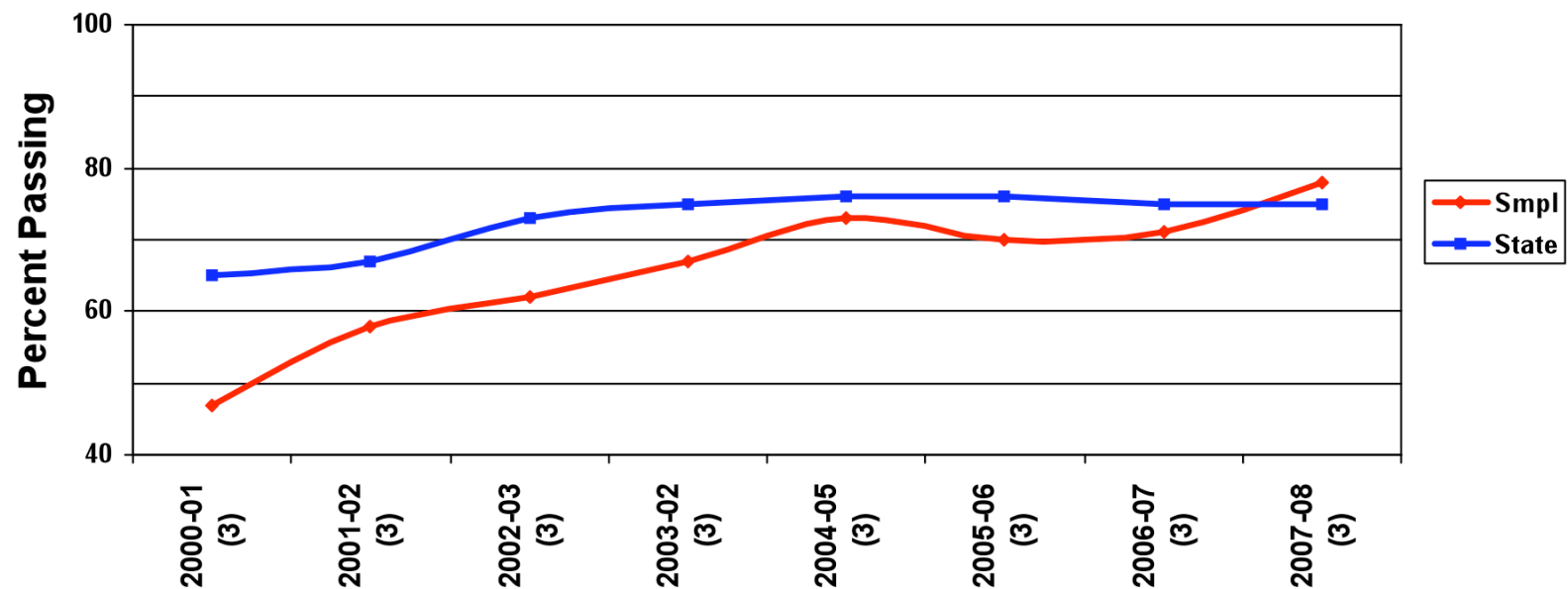
■ Grade Level Trends

- Develop a graph showing the percent passing ELA and Math for each grade level during the past 8 years
- Include the state averages

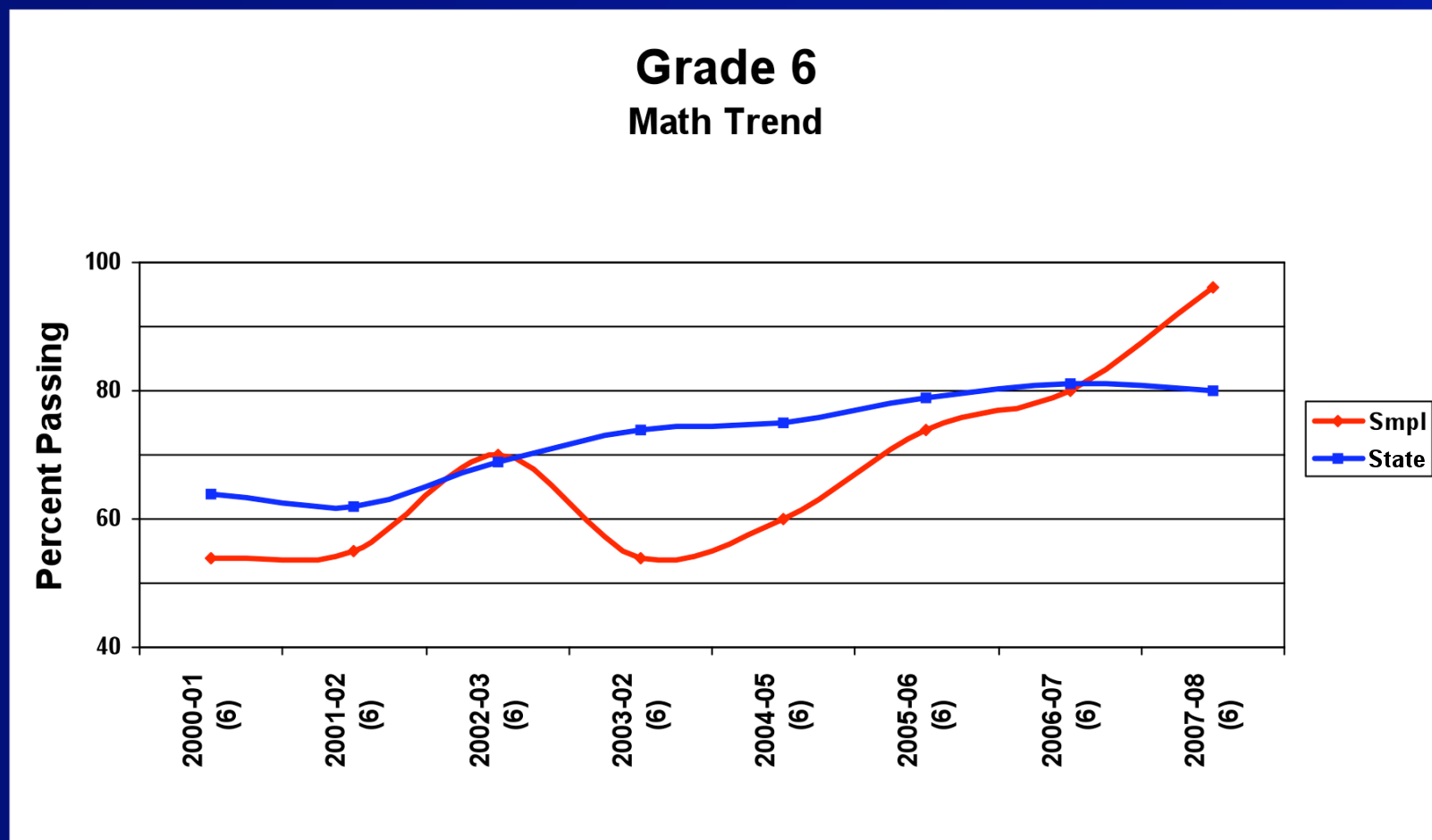
Trend Analysis

- *Grade Level Trends*

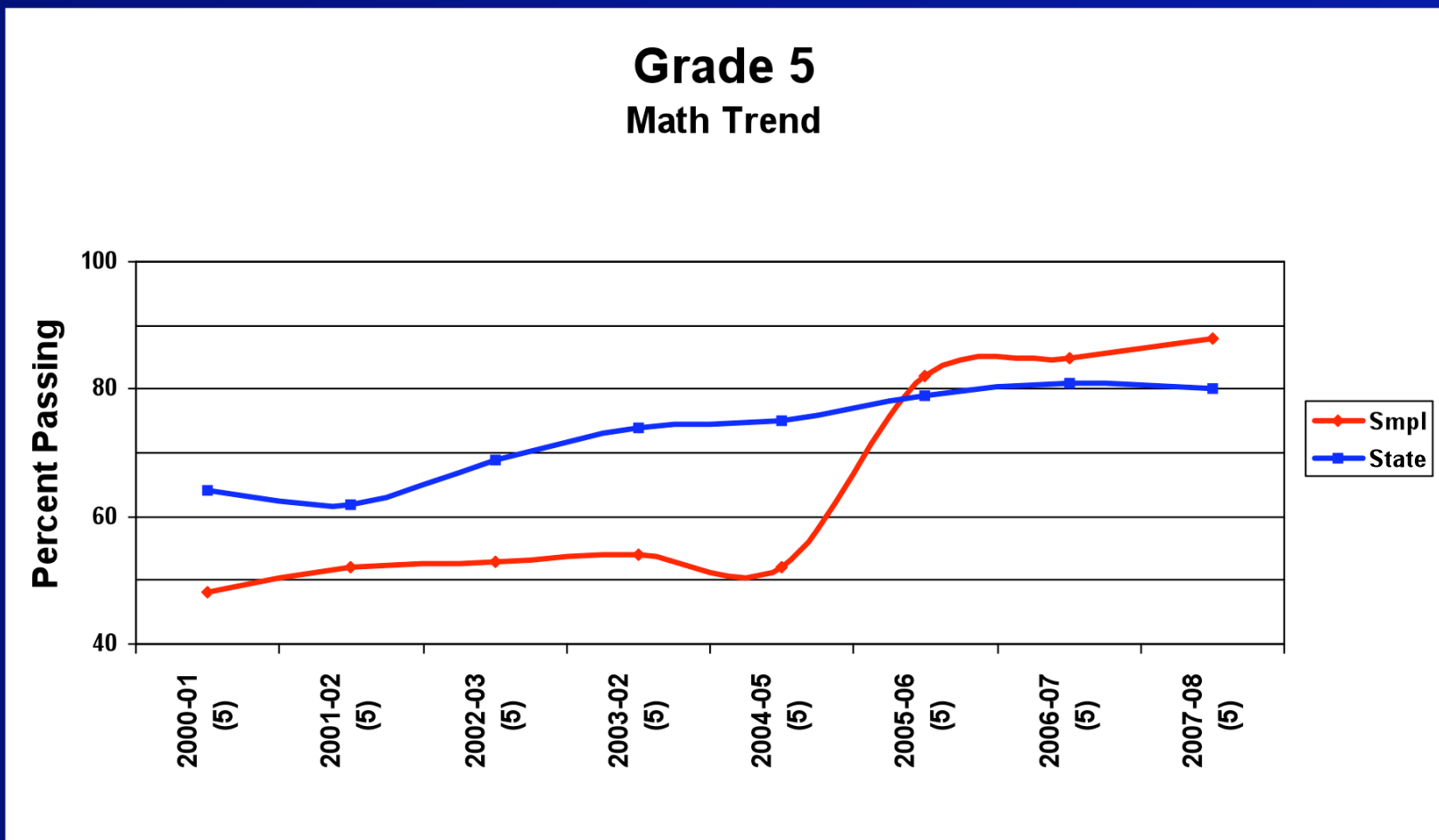
Grade 3 Language Arts Trend



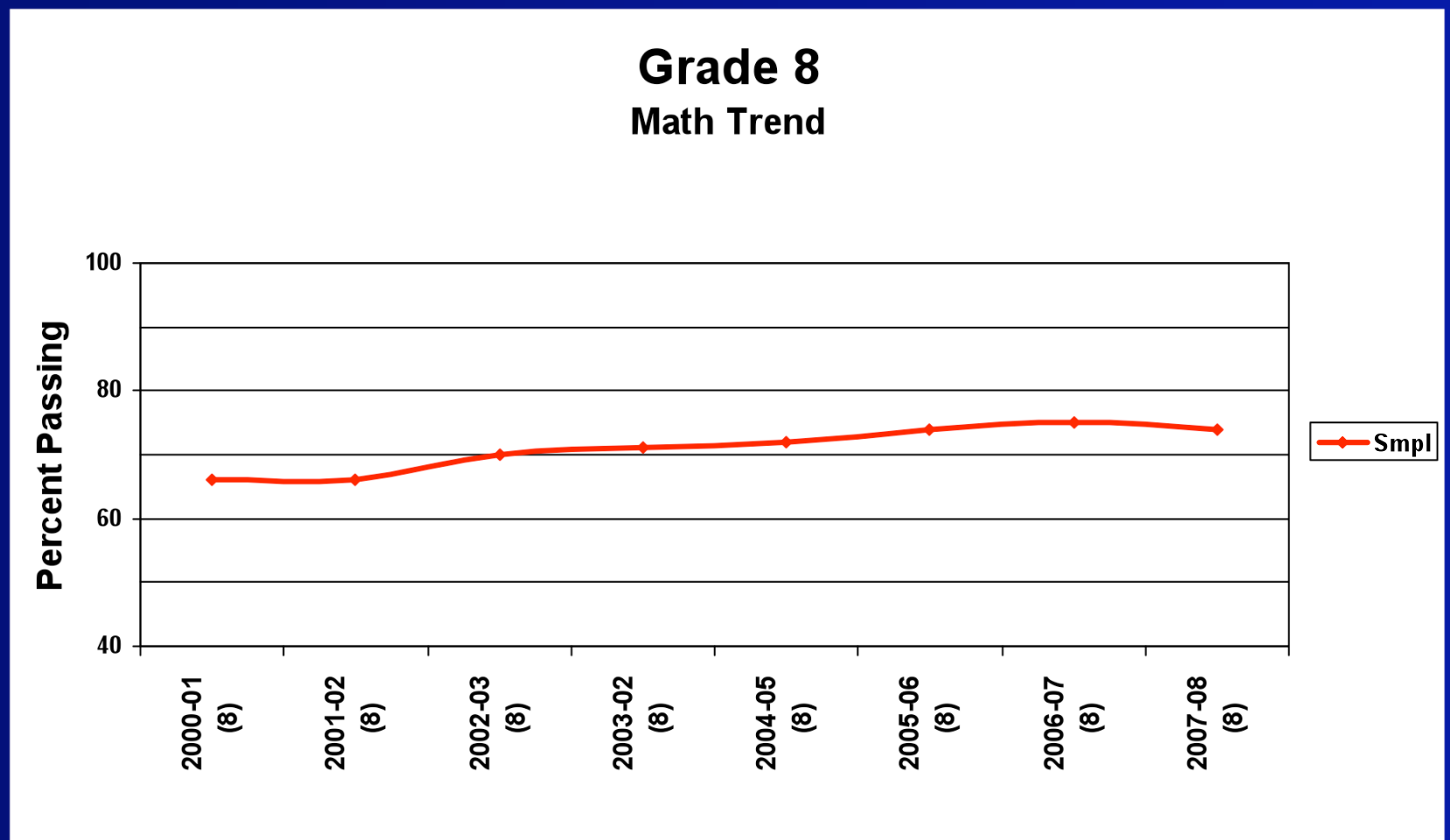
Curricular content was adjusted in 2003-04.



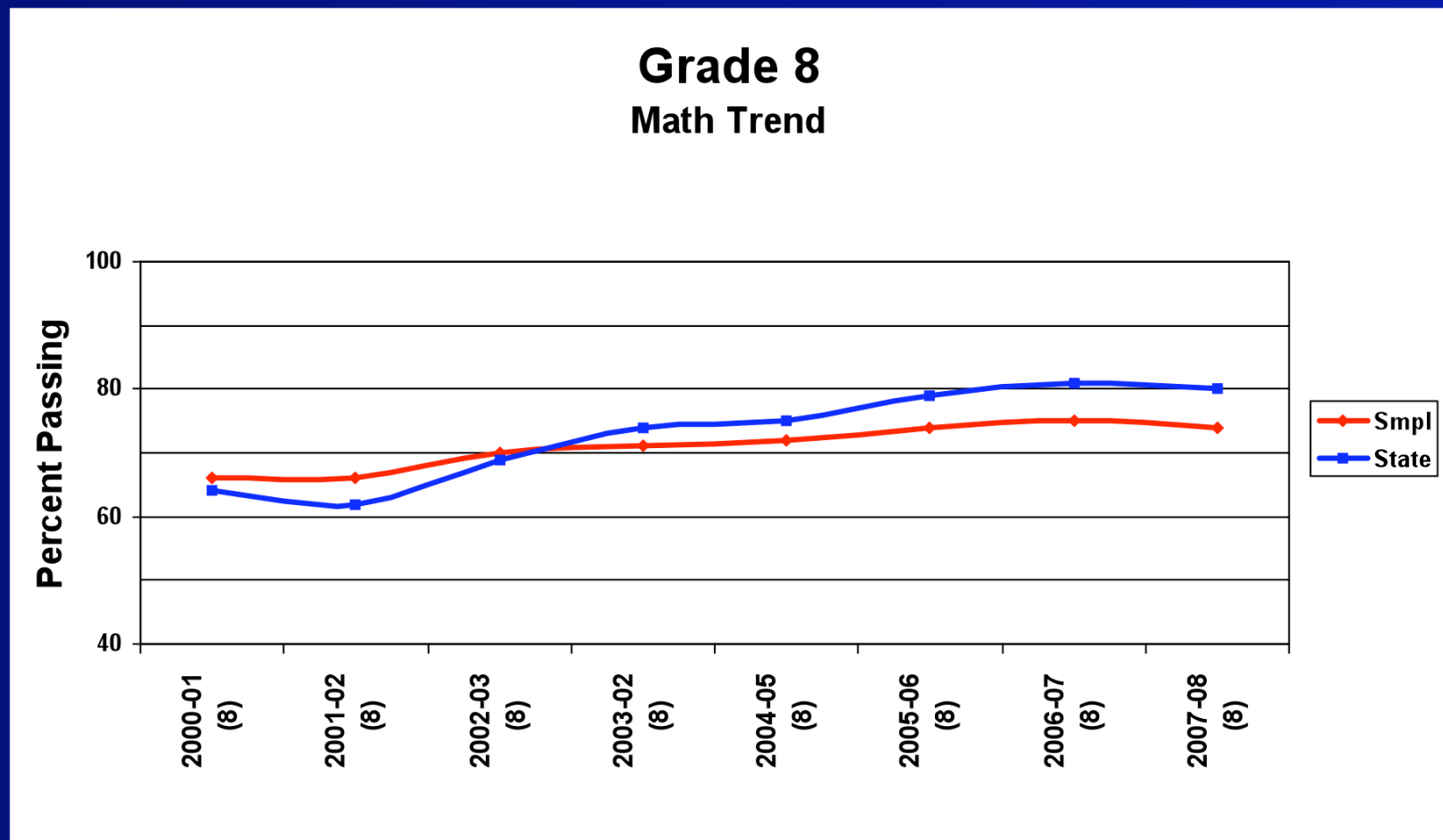
In this instance, the principal placed her best teachers in 5th grade.



This graph shows a 10 point gain over 7 years...



...but in actuality, it was an 8 point loss.



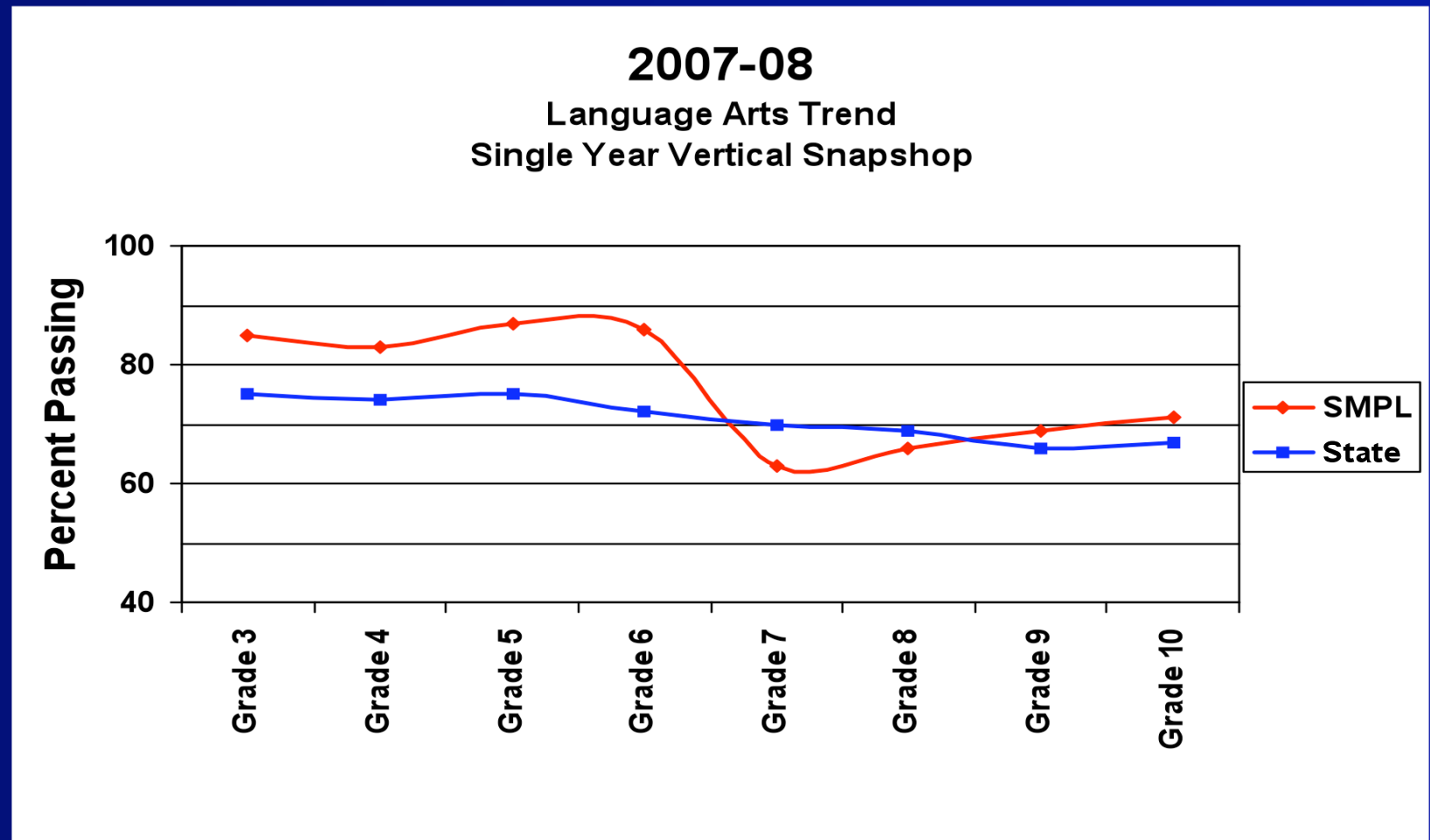
Trend Analysis

- Single Year Vertical Snapshots

- **Single Year Vertical Snapshots**
 - Develop a graph showing the percent passing ELA and Math for each grade level for the current year
 - Include the state averages

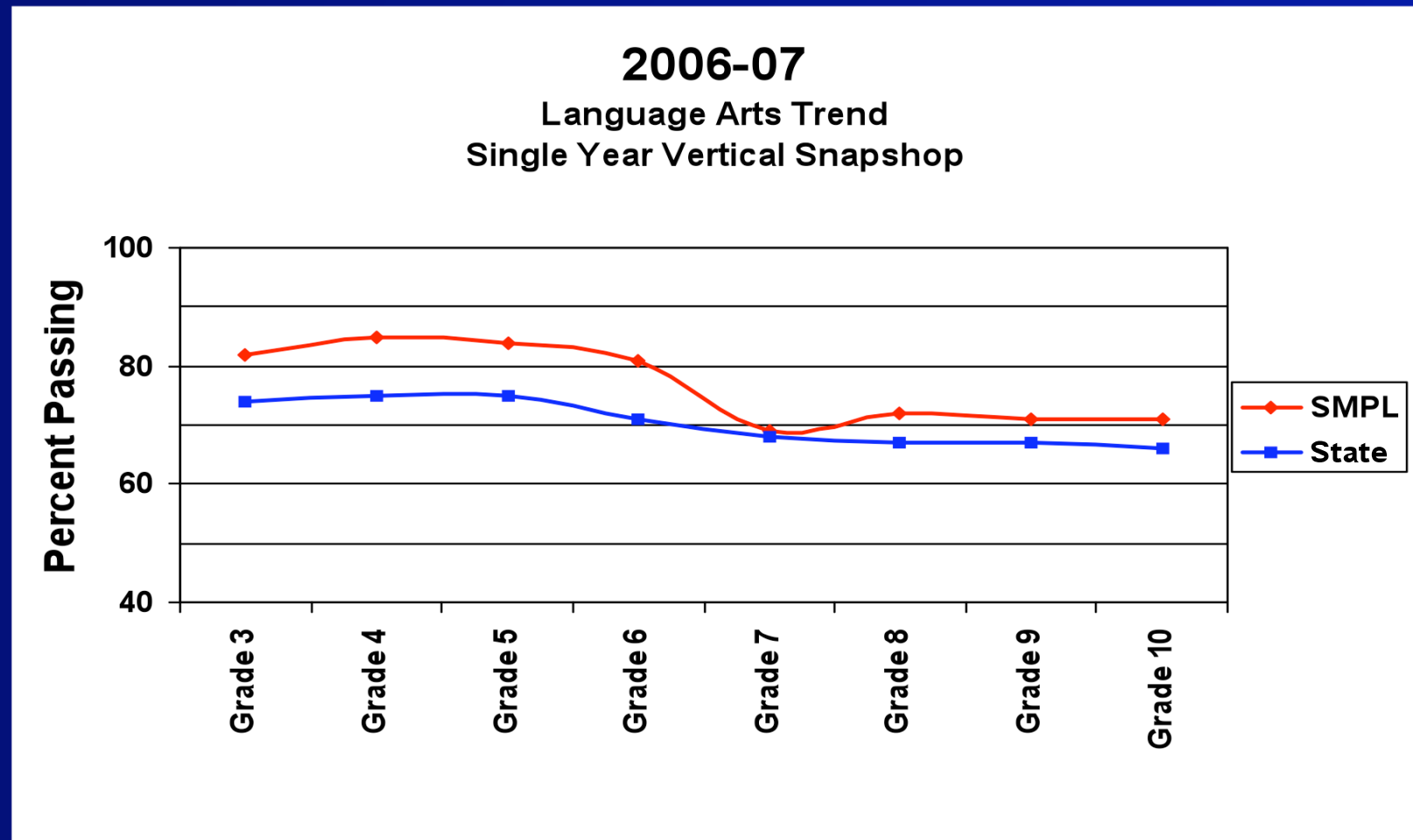
Trend Analysis

- Single Year Vertical Snapshots



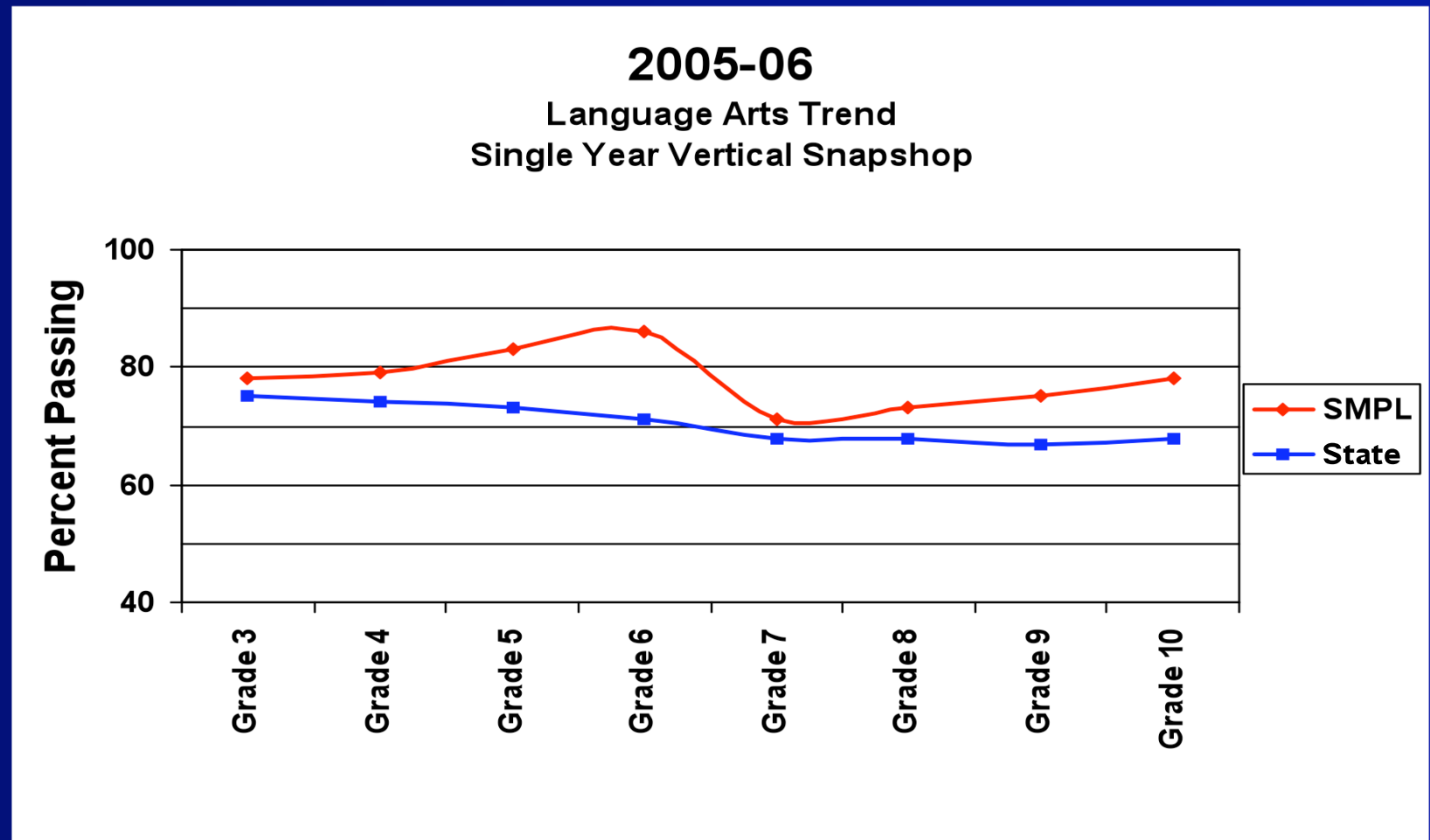
Trend Analysis

- *Single Year Vertical Snapshots*



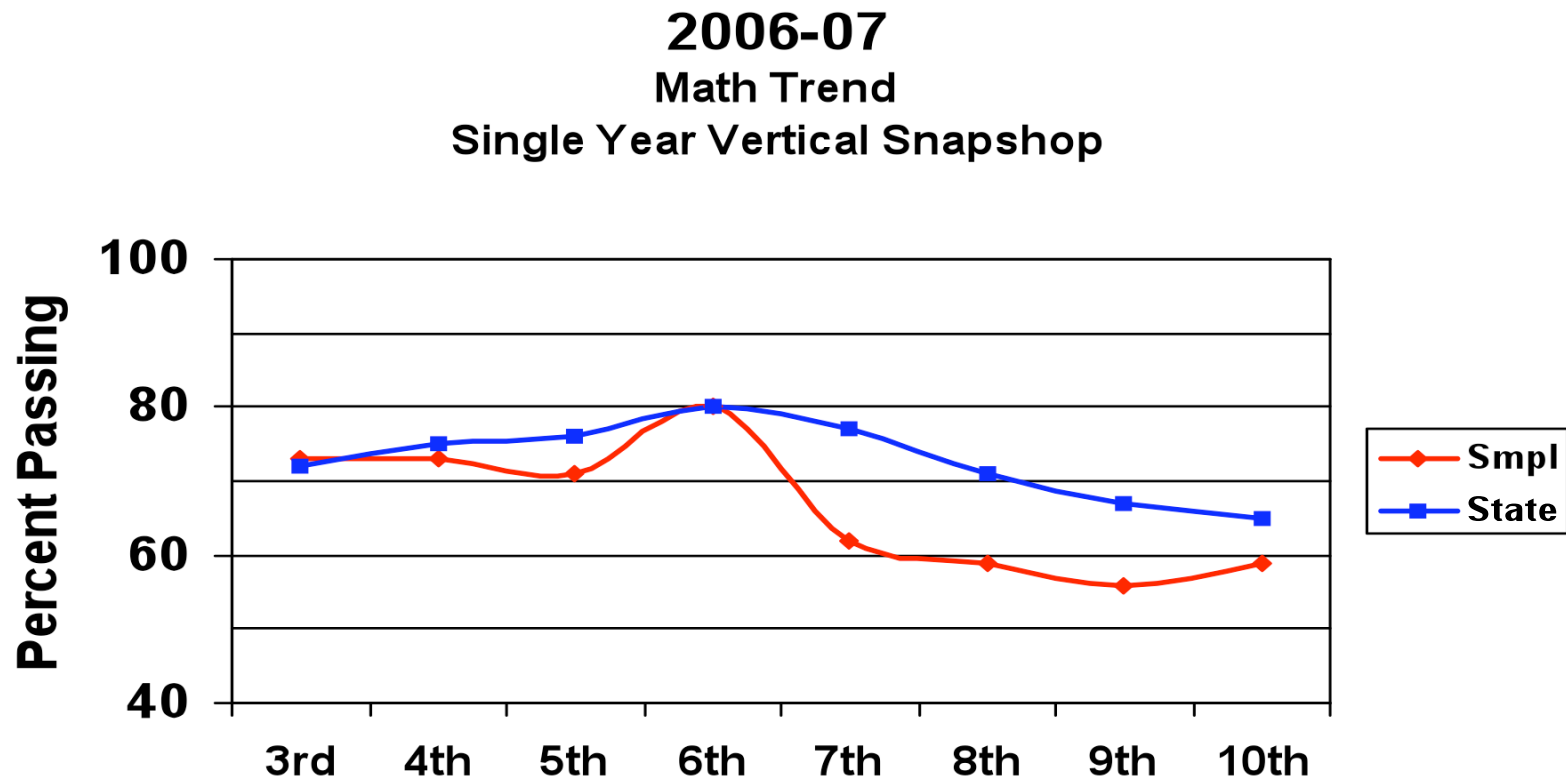
Trend Analysis

- Single Year Vertical Snapshots



Trend Analysis

- *Single Year Vertical Snapshots*



Questions...???

Cluster Analysis

- Cluster analysis is used to determine which standards are most at risk of movement.
- When combined with information obtained from the AS Analysis & Trend Data, Cluster Analysis pinpoints where to focus your attention, efforts & resources.

Cluster Analysis

- Create a chart with all the Academic Standards represented. Each standard will have 6 corresponding categories: greater than 10, 6 to 10, 0 to 5, -1 to -5, -6 to -10, less than -10.

Cluster Analysis

- Using the Strengths & Weaknesses section from the back of the ISTEP Student Reports, place a tally mark in the correct box for each standard
- Repeat this until the student population is exhausted for that group (could be class or grade level)

Cluster Analysis

	More than 10	10 to 6	5 to 0	-1 to -5	-6 to -10	Less than -10
Number Sense						
Computation						
Algebra & Functions						
Geometry						
Measurement						
Problem Solving						

What do you notice about these three standards?

	More than 10	10 to 6	5 to 0	-1 to -5	-6 to -10	Less than -10
Number Sense	62	16	10	5	4	3
Computation						
Algebra & Functions	56	20	12	4	6	2
Geometry						
Measurement	20	28	40	8	0	2
Problem Solving						

Cluster Analysis

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Problem Solving						

Which standard is the weakest according to pass/fail criteria?

	More than 10	10 to 6	5 to 0	-1 to -5	-6 to -10	Less than -10
Number Sense	24	20	32	15	5	4
Computation	12	12	58	6	10	2
Algebra & Functions	20	31	9	38	2	0
Geometry	38	18	2	18	15	9
Measurement	8	54	22	15	0	1
Problem Solving	41	22	7	3	12	15

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Which standard shows the greatest potential & why?

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Which standard gives cause for the greatest concern & why?

	More than 10	10 to 6	5 to 0	-1 to -5	-6 to -10	Less than -10
Number Sense	24	20	32	15	5	4
Computation	12	12	58	6	10	2
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Which standard is least liable to move & why?

	More than 10	10 to 6	5 to 0	-1 to -5	-6 to -10	Less than -10
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Questions...???

Bringing it all Together

- Using the data obtained from all three types of analysis will provide you with a better picture of where to target your efforts.
- We did & saw a dramatic improvement.

Classroom Transference

- Give teachers the data in an understandable format.
 - Graphs work great for visual learners
 - Color code if possible

Classroom Transference

- Don't overwhelm them with data.
 - Use the Academic Standards Analysis to help the teachers develop a “big picture” approach
 - Use the Grade Level Trends & Basic Cohort Trends to establish the need for change within a grade level

Classroom Transference

- Don't overwhelm them with data.
 - Use the Single Year Vertical Snapshots to establish grade level weaknesses as well as school-wide trends
 - Teachers will use the Detailed Cohort Trends & the Cluster Analysis to target specific Academic Standards

Classroom Transference

- **Pick your battles**
 - Focus on the changes that will succeed
 - Success can breed success if you are proactive
 - If your staff is resistant, group your best teachers into one grade level & praise their successes to all staff

Classroom Transference

- **Communicate**
 - Staff must hear you talk about data often & in normal conversations
 - Look for opportunities to publicly praise staff for using data
 - Adjusting curricular content
 - Resequencing curriculum
 - Changing pedagogy

Classroom Transference

- Pull the Trump Card only if needed



Outsourcing Your Reports

- **If you would like help with the first stage of analysis, I am available to produce your reports for you.**
- **Please go to:**
 - **www.principalgrowthsolutions.com**
 - **Sample Reports Online**
 - **Simple Requesting Process**
 - **Schools are invoiced**

Contact Info

**Please feel free to contact me
regarding any of this information**

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